



Communications Unit Leader

Home Study Training



Communications Unit Leader

The Communications Unit Leader (CUL) is the senior communications enabler at a mission base. The type of mission isn't important, except that in general, disaster incidents last longer and require more communications resources than SAR incidents do. The CUL must be both a technical manager and an operational leader, able to operate communications equipment, teach others in the correct methods of operating communications equipment, install portable and mobile equipment and perform basic troubleshooting and repair of the equipment. The CUL must be an expert mission radio operator (MRO), and must be familiar with the policies established for MRO's.

The CUL is responsible for assessing the available communications resources available to the mission's Incident Commanders (IC's), determining which resources are appropriate, requesting the resources and then setting them up. The CUL may then supervise the operation of the communications networks, including supervising the mission radio operators used at the base.

The scope of communications includes not only CAP radio systems such as VHF-FM radios, but other radio systems including public agency or military, telephone systems, public address systems, and to a certain extent performing or supervising repairs to these systems.

While under classical ICS concepts the Communications Unit is under the Service Branch of the Logistics Section, under CAP operations communications is normally a subordinate component of the Operations Section. As such, the CUL reports to the Operations Section Chief (OSC), but works closely with the Base Manager and other staff officers to achieve and maintain the necessary communications circuits.

General Responsibilities:

The Communications Unit Leader is responsible for developing plans for the effective use of incident communications equipment and facilities; installing and testing of communications equipment; supervision of the Incident Communications Center; distribution of communications equipment to incident personnel; and the maintenance and repair of communications equipment.

- a. Review Common Responsibilities (CAPR 60-3 para 8-10).
- b. Review Unit Leader Responsibilities (ICS FOG page 1-3).
- c. Determine unit personnel needs. Request additional resources as needed through the PSC or IC.
- d. Prepare and implement the Incident Radio Communications Plan (ICS Form 205).
- e. If needed, ensure the Incident Communications Center and Message Center are established.
- f. Ensure communications systems are installed and tested.
- g. Ensure an equipment accountability system is established.
- h. Ensure radio equipment from caches or fly-away kits is distributed per the Incident Radio Communications Plan.
- i. Provide technical information as required on:
 - Adequacy of communications systems currently in operation.
 - Geographic limitation on communications systems.

- Equipment capabilities/limitations.
- Amount and types of equipment available.
- Anticipated problems in the use of communications equipment.
- j. Supervise Communications Unit activities.
- k. Maintain records on all communications equipment as appropriate.
- l. Recover equipment from relieved or released units.

Mission Initiation:

When a CAP mission begins, the need for effective communications can't be understated. The mission staff, even if it's just a single IC, needs to be able to communicate with the resources in use. Communications are the reins of command, without communications it's impossible to be a commander, and the CUL is the key to it all.

CUL's are normally only utilized when a mission base is opened, but the CUL should contact the IC to offer their services for any mission. If a base is opened, the CUL should be familiar with the facilities available at the base, the local repeaters, and the wing communications resources available. If needed, the IC will ask for a fly-away radio kit for mission communications, the CUL should remind the IC of this and other resources available. Attachment xx has a partial list of some of the Wing level communications resources, their location and point of contact. For a major effort incident (SAR or DR), the CUL should start requesting comm resources, both material and personnel, from the IC, the LSC, or the CAWG Regional Resource Coordinators. Don't ask for more resources than you can effectively use, and be realistic. Keep in mind that the incident may go several days or more, and personnel resources, especially, are limited.

Before going to the base, you should assemble your mission kit. Attachment xx has a list of the administrative supplies recommended for radio operations, while attachment xx has a list of repair parts and special tools that a CUL can use to assemble, test and repair communications systems. You'll need typical CAP uniforms, and don't forget your ES credentials.

On arriving at the base, sign in with check-in, and find the IC. Determine the best location for the incident communications and message center (if not already located), and begin setting up equipment. When determining a location for the comm center, keep in mind that there needs to be enough room for all the equipment and operators, sufficient electrical power for the equipment, sufficient lighting and ventilation, and easy access for antenna cables. Ideally, the comm center should be a separate room away from operations, staging, briefing, etc. Wherever the comm center is, there should be some way to easily communicate with the operations and planning sections, and with the IC. This may be via a messenger or an intercom system of some sort.

Installing Radio Equipment:

While it's not possible to practice with all possible types of equipment, you can gain experience by participating in as many communications exercises as possible, and using different resources on those exercises. Each type of communications system is installed differently, but there are certain general steps that must be followed. These steps include

- ❑ Position equipment
 - Antennas:
 - Locate antennas
 - Install antennas
 - Install antenna cable (coax)
 - Install (raise) antenna masts, guy as needed. Install safety signs and flagging
- ❑ Connect cable to radios
- ❑ Verify all coax connections visually before energizing radios
- ❑ Install power supply:
 - Locate power supply
 - Plug power supply into AC outlet
 - Note: AC power supplies should ALWAYS be plugged into grounded outlets
 - Connect radio power cable to power supply
- ❑ Verify all power connections
- ❑ Verify all transmitters are connected to antennas
- ❑ Install radio accessories like microphone, speaker, headsets, etc.
- ❑ Turn power supply on
- ❑ Turn radio on, verify operation.

Communications Plan

The CUL is responsible for preparing the Communications Plan for each operational period of the incident. The Incident Communications Plan (ICS Form 205) is part of the incident action plan, and shows the various communications circuits (frequencies) that are going to be used. To complete the ICS 205, boxes 1-3 are self explanatory. For section 4, in System/Cache indicate if the frequency is CAP or other agencies'. Channel is the channel indicator that will be used, always use the standard CAP VHF designations for channel 1-4. Function is the purpose for that frequency, for instance air-ground, inter-base, etc. For standard CAP repeater pairs, indicate the repeater name and tone, as well as the channel number for the radios being used in the communications center. Assignment can be used for specific circuits assigned to specific resources or callsigns to be used on those frequencies, and remarks are self explanatory.

Indicate all communications frequencies on the ICS 205, including aircraft frequencies, military, ISR or FRS (indicate channel/tone rather than frequency), and any other important frequency. Refer to the example (attachment xx) for further guidance.

Radio programming lists are available on the wing web site for all standard CAP radios (Tait, Johnson, Micom). The California Wing Ground Team Handbook (also available on the wing website) has a listing of many different frequencies that can be used.

Logs:

Use of the CAPF 110 (log) is covered in the Mission Radio Operator online training document.

The [CAWG ICS F 214](#) (Unit Log) should be used by the CUL to record all pertinent operational milestones and decisions that are made. The Unit log is a chronological, free-form record, and can be accomplished in a very casual manner. At the end of the operational period, the unit log

is handed off to the on-coming CUL; at the end of the incident, the unit logs become part of the incident paperwork record.

CAWG F 110A Ops Normal Check-in, is used by highbird or others for recording check-ins of assigned, operational resources. Directions for highbird operations can be found in "Highbird and Operations Normal Communications Procedures". The CUL must be completely familiar with the procedures outlined in that document, especially procedures for missed check-ins, and for minimizing the time that ops normal checks take.

Use of Non-CAP frequencies:

During actual SAR/DR missions, CAP may utilize non-CAP communications frequencies. Generally, if there is a legitimate need to use a non-CAP frequency and it's programmed into a CAP radio, you can use it. If other, non-CAP radios are being used, make certain that you have authorization to be on that frequency.

Attachment 1 Incident Log CAWG ICS F 214 (Sample, actual form different)

[illegible]

OPS NORMAL LOG CAWG Form 110a		Mission Number:	Date:	Incident Base:	Page # of pages	Highbird		
Check in Freq	Primary:	Secondary:		Repeater Name:		Rptr Ch:		
Team/Aircrew Number	Put an X in the box if Team/Crew checks in						ETA to Base	At Base
	Chop:	Time:	Time:	Time:	Time:	Time:		

Report to IC all missed check-ins if not contacted within 10 minutes.

Attachment 3 – Incident Communications Plan (CAWG ICS Form 205) (Sample, actual form different)

INCIDENT RADIO COMMUNICATIONS PLAN			Incident Base	Incident Number		Date Prepared	Time Prepared	Page of
			Incident Name					
			Operational Period Date / Time			From		To
4. BASIC RADIO CHANNEL UTILIZATION								
System / Cache	Channel	Function	Frequency			Assignment	Remarks	
			TX	Rec	Tone			
				5. PREPARED BY (COMMUNICATIONS UNIT)				

Attachment 4 Communications Unit Leader Mission Kit Checklist

Radio Operations Equipment and Supplies

- ☐ Adhesive labels (small, white)
- ☐ Affiliate agency frequency and tone guides (as available)
- ☐ Ball point pens and mechanical pencils with erasers
- ☐ Clock (preferably digital, 24 hour, battery operated, must have battery backup)
- ☐ Comm Logs – CAPF 110 (paper), electronic logs via MMU or ?? preferred
- ☐ Diagram of Base showing location of each staff position
- ☐ Drafting or masking tape
- ☐ Earphones for each radio
- ☐ ICS Form 205 (Incident Radio Communications Plan) Paper
- ☐ ICS Form 214 (Unit Log)
- ☐ ICS Form 216 (Radio Requirements worksheet) Paper
- ☐ ICS Form 217 (Radio Frequency assignment worksheet) Paper
- ☐ List of Communications Resources: Radios, portable repeaters, digital, text, mobile HF, etc
- ☐ Manila file folders
- ☐ Marker, suitable for laminated boards
- ☐ Message Forms – ICS form 213 or CAPF 105 (213 preferred, multiple part)
- ☐ Message pads with duplicate (retained) copies – preferably large sheet format – several books
- ☐ Mini tape recorder, with tape and batteries, ready to go
- ☐ Ops Normal Logs - CAWG F 110A
- ☐ Paper clips, assorted
- ☐ Post-it pads (2x2 minimum)
- ☐ Push pins
- ☐ Radio Programming lists and operations instructions for each radio
- ☐ Radio Station Roster for Wing, listing Name, Callsign, location, type
- ☐ Regs in binder:
 - ☐ CAPR 100-series
 - ☐ CAPR 60-series
 - ☐ CAWG Ground Team Handbook (for comm frequencies)
- ☐ Repeater map for state
- ☐ Staple remover
- ☐ Stapler and staples
- ☐ Status Board: General Communications Information, laminated (see end page for format)
- ☐ Status Board: ICS Form 205 (Incident Radio Communications Plan) Laminated (show frequencies in use)

Comm Unit Leader Recommended Repair Parts and Special Tools Checklist

- ❑ 30 and 45 Amp Anderson Power Pole Connectors
- ❑ AC Outlet tester (plug-in type)
- ❑ Adjustable open end (Crescent) wrenches, small and medium
- ❑ Antenna insulators (for HF antenna repair)
- ❑ Antenna wire (for HF antennas)
- ❑ Coax (misc cable lengths)
- ❑ Coax adapters – assorted, including SO-239 barrels, PL-259 to N, N to N barrels, PL-259 to BNC, etc
- ❑ Coax connectors (PL-259)
- ❑ Coax cutters
- ❑ Coax stripper
- ❑ Compass, magnetic (for aligning antennas)
- ❑ Crimp on terminals, assorted
- ❑ Electrical tape
- ❑ Flagging tape (for marking hazards)
- ❑ Flash light, with spare batteries and bulbs
- ❑ Fuses, AGC and ATE type, assorted ratings
- ❑ Gloves, leather work
- ❑ Hardhat with goggles
- ❑ Knife, electricians
- ❑ Miscellaneous hardware – screws, nuts, bolts, etc.
- ❑ Needle nose pliers
- ❑ Nylon rope (small, for guys)
- ❑ Scissors, electricians
- ❑ Screwdrivers flat and Phillips, assorted sizes
- ❑ Solder aids
- ❑ Solder, electronic
- ❑ Soldering gun
- ❑ Soldering iron
- ❑ Strapping tape
- ❑ SWR meter - VHF
- ❑ Telephone cable connectors (jack-jack)
- ❑ Telephone extension cables 25'
- ❑ Telephone jack tester (LED type)
- ❑ Telephone multiple outlet adapter
- ❑ Tie wraps, assorted (black)
- ❑ Vise grip pliers, small and medium
- ❑ VOM meter
- ❑ Watt meter - VHF
- ❑ Wire crimpers
- ❑ Wire cutters
- ❑ Wire strippers
- ❑ Wire, stranded, assorted sizes and colors

Attachment 5 - Mission Base Communications Procedures Checklist

General Procedures:

- ☐ Time – Local, 24 hour time used ONLY
- ☐ Messages recorded and relayed EXACTLY as sent. No interpretations.
- ☐ Message forms include:
 - Who From:
 - Who To:
 - Time Received:
 - What frequency or radio circuit received on (to send reply)
 - What is the message?
 - Name of person taking message
- ☐ Exercise messages – START and END each message with “EXERCISE MESSAGE”
- ☐ Exercise – actual emergency: Understand correct code phrase for actual emergency
- ☐ Messages delivered to the correct position (not person) – i.e., to Ops, Planning, etc.
- ☐ Phonetic alphabet used correctly
- ☐ User correct ICS terminology, callsigns
- ☐ Speak clearly
- ☐ Have local emergency phone numbers and procedures posted:
 - Fire/Police/EMS
 - Tower/FSS (direct)
 - Other

Attachment 6 California Wing Communications Resources

Resource	Location	Point of Contact
Fly-away kit North	Sq 80, Reid-Hillview	Frank Duarte
Fly-away kit South	HQ CAWG	DC (Brammer)
Mobile Repeater Vehicle	HQ CAWG Van Nuys	DC (Brammer)
Mobile HF Kit	HQ CAWG Van Nuys	DC (Brammer)
Airborne Repeater Kit	HQ CAWG Van Nuys	DC (Brammer)

Communications unit leaders must be aware of the location and status of all CAWG communications resources. Current information on status and points of contact is located on the CAWG website.

Communications Local Procedures and STATUS

- ☐ **Mission Number** _____ **Base**
Location _____
- ☐ **Time – Use 24 hour Local time ONLY**
- ☐ **Messages recorded and relayed EXACTLY as sent. No interpretations.**
- ☐ **Write clearly! PRINT!**
- ☐ **Include on Messages:**
 - **Who From:**
 - **Who To:**
 - **Time Received:**
 - **What frequency or radio circuit received on (to send reply to)**
 - **What is the message?**
 - **Name of person taking message**
- ☐ **Exercise messages – START and END each message with "EXERCISE MESSAGE"**
- ☐ **Deliver the message to the correct position (not person) – i.e., to Ops, Planning, etc.**
- ☐ **User correct ICS terminology, callsigns, phonetic alphabet**
- ☐ **Speak clearly**

- ☐ **BASE CALLSIGN** _____ **BASE**

- ☐ **Actual Emergency Code Phrase:** _____

- ☐ **Local emergency phone:**
 - **Fire/Police/EMS** _____
 - **Tower/FSS (direct)** _____
 - **Other** _____
 - **Other** _____
 - **Other** _____

- ☐ **Base Phone Number:** _____

- ☐ **Directions to the Base:**

Other Information:

Attachment 8 - Bibliography and links to additional information

[CAP Reg 60-3 CAP ES Training and Operational Missions](#)

[CAP Reg 60-4 vol I part I CAP ES Mission Forms](#)

[CAP Reg 60-4 vol I part II CAP ES ICS Mission Forms](#)

[CAP Reg 60-4 vol II ES Training Forms](#)

[CAP Reg 100-1 Vol I Communications](#)

[CAP Reg 100-1 Vol III Radiotelephone Procedures](#)

[CAP Mission Radio Operator Tasks](#)

CAWG Mission Radio Operator Home Study Course

CAWG Highbird and Ops-Normal procedures

[Firescope ICS Field Operations Guide \(FOG\)](#)